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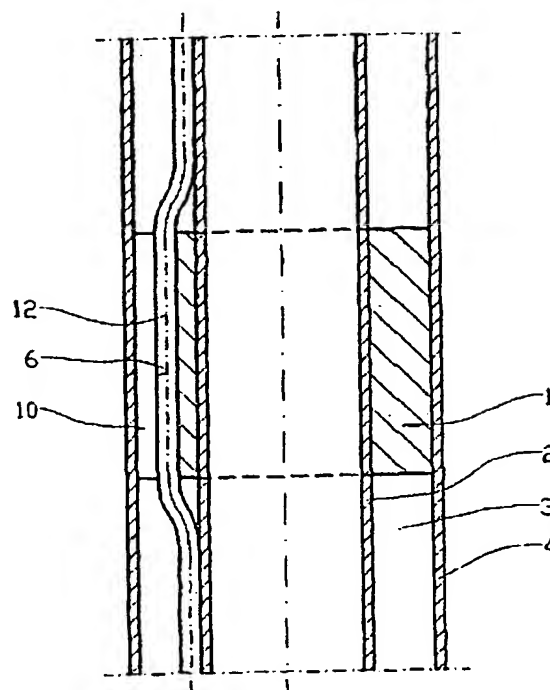
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[Continued on next page]

(54) Title: A CABLE DUCT DEVICE IN A SWELLING PACKER



II-II

(57) Abstract: A cable duct device in a swellable packer (1) of the kind in which the packer (1) is adapted to be able of sealing an annulus (3), and in which the swellable packer (1) is provided with at least one opening (6) therethrough adapted to constitute a duct for a cable (12).

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## INTERNATIONAL SEARCH REPORT

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PCT/NO 2003/000410

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: E21B 23/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI DATA, EPO-INTERNAL

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6173788 B1 (JEFFREY J. LEMBECKE ET AL), 16 January 2001 (16.01.2001), See whole document --	1-5
X	US 3899631 A1 (BILLY E. CLARK), 12 August 1975 (12.08.1975), see whole document --	1-5
A	US 6135210 A1 (OLEGARIO S. RIVAS), 24 October 2000 (24.10.2000), column 4, line 61 - column 5, line 20 --	1-5
A	US 2242166 A1 (E. O. BENNETT), 13 May 1941 (13.05.1941), figures 3-4 -- -----	1-5

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/NO 2003/000410

US	6173788	B1	16/01/2001	GB	2336170 A,B	13/10/1999
				GB	9907757 D	00/00/0000
				NO	315437 B	01/09/2003
				NO	991638 A	08/10/1999

US	3899631	A1	12/08/1975	NONE
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US	6135210	A1	24/10/2000	CA	2277566 A	16/01/2000
				GB	2339816 A,B	09/02/2000
				GB	9915984 D	00/00/0000

US	2242166	A1	13/05/1941	NONE
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